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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/039,703

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Michael S. Foster

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EXAMINER

KUO, ALEXANDER E

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/039,703	<b>Applicant(s)</b> FOSTER ET AL.	
	<b>Examiner</b> Alexander Kuo	<b>Art Unit</b> 2667	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/2/05.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/02/2005</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment filed on Nov. 2, 2005 under 37 CFR 1.131 has been received and considered but is ineffective in overcoming the grounds for rejection.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

The examiner requests that applicant update and revise the section entitled, "Cross-Reference to Related Application(s)" so as to reflect the current status and Patent Application Numbers of mentioned applications.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin v. Rangachar.

- Consider claim 1, Chin has a switch receiving a frame (packet 300), where upon receiving the frame, it is determined whether the destination virtual address, or "PTID (350)," is reserved (or unknown), and if it is, determining whether another virtual address (306, 308) of the frame maps to a port of the switch. It is understood that, as

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broadly recited by the applicant, that the PTID serves as one destination virtual address, and that the pair of encapsulated addresses (306, 308), serve as another virtual address. The checking of whether another virtual address of the frame maps to a port of the switch is taught as a multi-tier process by Chin. Chin first does a full address comparison with a table stored in the CAM (column 3, line 24-25). Once the address comparison is done and a match found, the PTID is provided (column 3, line 29-30), from which through a mapping of PTID to port, the outbound port is identified (column 2, line 38-49). Inherently, Chin discloses that when the other virtual address of the frame maps to a port of the switch (matching result found in CAM), that the frame will be transmitted via the mapped-to port. In conformance with the broad limitations recited by the applicant, each switch acts as an individual and distributed network manager. Chin further teaches that when the other virtual address does not map to a port of the switch, for the frame to be flooded to all ports (column 3, line 30-31), inherently transmitting the frame to the network manager.

Chin does not include the method wherein the reserved virtual address is designated to the frame for sending the frame from a device to the network manager. Rangachar teaches how the use of a centralized network manager to perform many control and signaling functions normally performed by a switch provides for a more reliable network (column 3 & 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Chin a centralized network manager as suggested by Rangachar in order to improve the network, where Chin's CAM would be located at the centralized network manager. Therefore, when Chin's destination virtual

address is reserved (or unknown), it is sent to the CAM, which is located on a centralized network manager. It can thus be said that by being unknown, the frame has been designated, as broadly recited by the applicant, to be sent to the network manager.

- Regarding claim 2, the destination virtual address (PTID) is encapsulated into the original frame. As shown in Figure 3 of Chin, both the destination virtual address (350) and the other virtual address (306, 308) are stored in the header of the frame.

- Regarding claim 3, the above analysis of Chin reference with respect to claim 1 is equally applied to this claim, with the further analysis that the frame is transmitted via a port based on a mapping of virtual addresses to port as shown in Figure 6C.

- Regarding claim 4, each port of the switch has its own mapping (Chin, column 2, line 40).

- Regarding claim 5, the above analysis of Chin v. Rangachar with respect to claim 1 is equally applied to this claim, where the transmitting of the frame via the mapped-to port transmits the frame to the network manager (where the CAM is located).

- Regarding claim 6, the mapped-to port transmits the frame via in-band communications (Chin, column 3, line 38).

- Regarding claim 7, Chin teaches that when a path is "learned," the use of out-of-band data path (column 3, line 36) is used to transfer information (the frame) back to the previous device, or switch, (Figure 6B), and to the CPU, located within the network

manager. Inherently, the network manager transmits the frame via out-of-band communications.

- Regarding claim 8, referencing and combining the analysis of both claims 1 and 7, it is clear that Chin has a network manager that is distributed to devices connected to switches and the network manager transmits the frame via an out-of-band communications to a device connected to the switch.

- Regarding claim 9, including Rangachar's centralized network manager obviously results in a network manager that is centralized where the frame is transmitted to the network manager via in-band communications.

- Regarding claims 10-17, the above analysis of Chin reference with respect to claims 1-4 and 7-8 are also equally applied to these broader claims, where it is understood that a switch is also a router.

- Regarding claims 18-30, the above analysis of Chin reference with respect to claims 1-4, 7-8, and 10-17 are also equally applied to these apparatus claims.

- The examiner feels that the Amendments made to applicant's claim is not sufficient to overcome rejection. The Amendment simply revised the claim so as that the reserved virtual address would *designate* the network manager. In view of the broad limitations as set forth by the applicant, the network manager is designated when the reserved address has to be sent to said network manager (as previously discussed in more detail).

***Conclusion***

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jacquet discloses a system for transmitting messages to switches utilizing frames with multiple addresses as well as the flexibility to base routing decision on various criteria. Crayford teaches a network management process that also has a second address encapsulated into the initial message that can be selectively routed to a network manager. Easki provides the use of a uniform VPI/VCI identifier, similar to the virtual destination address of the applicant.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Kuo whose telephone number is (571) 272-5246. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
ELECTRONIC BUSINESS CENTER 2/2/06